

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004-CE-08-AD; Amendment 39-13670; AD 2004-12-11]

RIN 2120-AA64

Airworthiness Directives; Pilatus Aircraft Ltd. Models PC-12 and PC-12/45 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA adopts a new airworthiness directive (AD) for all Pilatus Aircraft Ltd. (Pilatus) Models PC-12 and PC-12/45 airplanes. This AD requires you to check the airplane logbook to determine whether certain inboard and outboard flap flexshafts have been replaced with parts of improved design. If the parts of improved design are not installed, you are required to replace certain inboard and/or outboard flap flexshafts with the parts of improved design. The pilot is allowed to do the logbook check. If the pilot can positively determine that the parts of improved design are installed, no further action is required. This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Switzerland. We are issuing this AD to prevent rupture of the flap flexshafts due to corrosion, which could cause the flap system to become inoperable.

DATES: This AD becomes effective on July 26, 2004.

As of July 26, 2004, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

ADDRESSES: You may get the service information identified in this AD from Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 6208; facsimile: +41 41 619 7311; e-mail: SupportPC12@pilatus-aircraft.com or from Pilatus Business Aircraft Ltd., Product Support Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040.

You may view the AD docket at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2004-CE-08-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. Office hours are 8 a.m. to 4 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? The Federal Office for Civil Aviation (FOCA), which is the airworthiness authority for Switzerland, recently notified FAA that an unsafe condition may exist on all Pilatus Models PC-12 and PC-12/45 airplanes equipped with an inboard and/or outboard flap flexshaft, part numbers (P/N) 945.02.02.203 and/or 945.02.02.204. The FOCA reports several occurrences of corrosion found on the inner drive cables of these flap flexshafts.

The FOCA determined that moisture from the pressurized cabin could enter the flap flexshafts through the fittings of the protection hose causing corrosion. This corrosion could cause the flap flexshafts to rupture.

What is the potential impact if FAA took no action? If not prevented, corrosion on the flap flexshafts could cause flap flexshafts to rupture and lead to the flap system becoming inoperable.

Has FAA taken any action to this point? We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all Pilatus Models PC-12 and PC-12/45 airplanes of the same type design that are equipped with an inboard and/or outboard flap flexshaft, P/N 945.02.02.203 and/or P/N 945.02.02.204. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on April 9, 2004 (69 FR 18843). The NPRM proposed to require you to check the airplane logbook to determine whether certain inboard and outboard flap flexshafts have been replaced with parts of improved design. If the parts of improved design are not installed, you would be required to replace certain inboard and/or outboard flap flexshafts with the parts of improved design.

Comments

Was the public invited to comment? We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

Comment Issue No. 1: Revise the Stated Result of the Unsafe Condition

What is the commenter's concern? The manufacturer states that failure of the flap system will not lead to loss of control of the airplane. The manufacturer explains that the flap computer (FCWU) protects the system against asymmetric flap deployment with a failure rate of 10E-9 in the event of a flexshaft rupture (and other failure modes). The pilot has no possibility to override this protection.

The manufacturer wants us to state that rupture of the flap flexshafts due to corrosion could cause the flap system to become inoperative but does not result in loss of control of the airplane.

What is FAA's response to the concern? We agree with the manufacturer. After reviewing additional information provided by the FOCA of Switzerland about the result of the unsafe condition on the flap flexshafts, we will change the final rule AD action based on this comment.

Comment Issue No. 2: Change the Costs of Compliance Section

What is the commenter's concern? The manufacturer states that of the 260 airplanes affected by this AD, only 65 need to have the replacement parts installed. The manufacturer wants the cost of compliance changed to reflect the cost of installing the replacement parts for these 65 airplanes instead of all 260 airplanes.

The manufacturer has also agreed to cover the cost of replacement parts for all airplanes even though the warranty credit period has expired. The manufacturer also wants us to change the cost of compliance to reflect this reduction.

What is FAA's response to the concern? We partially agree with the manufacturer. We agree that there may be only 65 airplanes currently on the United States (U.S.) registry that need to have the replacements parts installed. However, because parts could have been replaced on an airplane after it left the manufacturer, we used the total number of affected airplanes in the Costs of Compliance section. We have no way of determining the exact number of airplanes that will need to have the replacements done.

We are not changing the final rule AD action based on this comment. We are, however, adding a section to cover the cost for doing the logbook check. Since all of the affected airplanes will probably not need to have the replacement parts installed, a logbook check will have to be done on all of the affected airplanes in order to make this determination.

Comment Issue No. 3: Change Paragraph (e)(5)

What is the commenter's concern? The manufacturer states that the language in paragraph (e)(5) prohibits you from ever installing any version of the inboard and outboard flap flexshafts other than part numbers (P/N) 945.02.02.205 and 945.02.02.206. Therefore, airplanes manufactured in the future with a new design part number for the flap flexshafts will be in automatic non-compliance with this AD.

The manufacturer wants this language changed to prohibit ever installing P/Ns 945.02.02.203 and 945.02.02.204 but allows you to install new flap flexshafts introduced in the future.

What is FAA's response to the concern? We agree with the commenter. Preventing future installations of new design parts was not the intent of this AD.

We will change the final rule AD action based on this comment.

Comment Issue No. 4: Withdraw the Proposed AD Action To Mandate Compliance With Pilatus PC12 Service Bulletin No. 27-015

What is the commenter's concern? The manufacturer states that there is no unsafe condition. The manufacturer further explains that the flap computer (FCWC) protects the system against asymmetric flap deployment with a failure rate of 10E-9 in the event of a flexshaft rupture (and other failure modes). This failure does not result in loss of control of the airplane and the pilot has no possibility to override this protection.

The manufacturer also states that they can confirm that over 90 percent of the U.S. registered airplanes have already had the replacement parts installed.

The manufacturer wants the proposed AD action withdrawn.

What is FAA's response to the concern? We do not agree that there is no unsafe condition. We agree that approximately 90 percent of the affected airplanes may have already had the replacement parts installed. However, at least 10 percent of the affected airplanes still need the replacement done. In addition, the only way to legally prevent these unsafe parts from being installed in the future is through AD action. This would include airplanes brought into the U.S. and put on the U.S. registry.

Therefore, to ensure that all affected airplanes do not have the unsafe parts installed, we are not changing the final rule AD action based on this comment.

Comment Issue No. 5: Make the AD Serial Number Specific

What is the commenter's concern? The commenter states that the manufacturer has been incorporating the new P/Ns in the production line of new airplanes since 2003 making the inclusion of airplanes produced after Manufacturer Serial Number (MSN) 489 illogical. Making the AD serial number specific speeds compliance and makes everyone's life easier.

The commenter wants the AD changed to be serial number specific as specified in Pilatus PC12 Service Bulletin No. 27-015.

What is FAA's response to the concern? We partially agree with the commenter. We agree that serial number specific ADs are easier to track; however, parts could be swapped from one of the earlier affected models and installed on a MSN outside of the range specified in the service information. To safeguard against this, we included a logbook check of all airplanes prior to doing any replacements.

We are not changing the final rule AD action based on this comment.

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the changes noted above and minor editorial corrections. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Changes to 14 CFR Part 39–Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many airplanes does this AD impact? We estimate that this AD affects 260 airplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes? We estimate the following costs to accomplish the logbook check:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour × \$65 per hour = \$65	Not applicable	\$65	\$65 × 260 = \$16,900.

We estimate the following costs to accomplish the replacement:

Labor cost per flap flexshaft	Parts cost per flap flexshaft	Total cost per airplane	Total cost on U.S. operators
2 workhours per flap flexshaft (4 flap flexshafts per airplane) × \$65 per hour = \$130 per flap flexshaft.	Parts covered under warranty by the manufacturer.	\$130 × 4 flap flexshafts = \$520 to replace all 4 flap flexshafts.	Maximum cost for replacing all 4 flap flexshafts on all 260 airplanes = \$520 × 260 = \$135,200.

Compliance Time of This AD

What is the compliance time of this AD? The compliance time for the replacement that will be required by this AD is "within the next 30 days after the effective date of this AD."

Why is this compliance time presented in calendar time instead of hours TIS? The unsafe condition specified by this AD is caused by corrosion. Corrosion can occur regardless of whether the airplane is in operation or is in storage. Therefore, to assure that the unsafe condition specified in this AD does not go undetected for a long period of time, a compliance time of calendar time is utilized.

Regulatory Findings

Will this AD impact various entities? We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

Will this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2004-CE-08-AD" in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. FAA amends § 39.13 by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-12-11 Pilatus Aircraft Ltd.: Amendment 39-13670; Docket No. 2004-CE-08-AD.

When Does This AD Become Effective?

- (a) This AD becomes effective on July 26, 2004.

What Other ADs Are Affected by This Action?

- (b) None.

What Airplanes Are Affected by This AD?

- (c) This AD affects Model PC-12 and PC-12/45 airplanes, all serial numbers, that are:
(1) equipped with an inboard and/or outboard flap flexshaft, part number (P/N) 945.02.02.203 and/or P/N 945.02.02.204; and
(2) certificated in any category.

What Is the Unsafe Condition Presented in This AD?

(d) This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Switzerland. The actions specified in this AD are intended to prevent rupture of the flap flexshafts due to corrosion, which could cause the flap system to become inoperable.

What Must I Do To Address This Problem?

(e) To address this problem, you must do the following. If you already replaced both the inboard and outboard flap flexshafts, P/N 945.02.02.203 and P/N 945.02.02.204, following Pilatus PC12 Service Bulletin No. 27-015, dated June 4, 2003, then paragraph (e)(5) of this AD is the only paragraph that applies to you:

Actions	Compliance	Procedures
(1) <i>For affected airplanes with a manufacturer serial number (MSN) of 489 or lower:</i> check the airplane logbook to determine if P/N 945.02.02.203 and P/N 945.02.02.204 inboard and outboard flap flexshafts are installed.	Within the next 30 days after July 26, 2004 (the effective date of this AD).	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may perform this check.

(2) <i>For affected airplanes with a MSN of 490 and above:</i> check the airplane logbook to ensure that P/N 945.02.02.203 and P/N 945.02.02.204 inboard and outboard flap flexshafts have not been installed since delivery.	Within the next 30 days after July 26, 2004 (the effective date of this AD).	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may perform this check.
(3) If you can positively determine that both P/Ns 945.02.02.203 and 945.02.02.204 inboard and outboard flap flexshafts are not installed, then no replacement is required.	Not Applicable	Not applicable.
(4) If you cannot positively determine that both P/Ns 945.02.02.203 and 945.02.02.204, inboard and outboard flap flexshafts are not installed, then you must replace each one or both with P/N 945.02.02.205 and P/N 945.02.02.206, as applicable (or a later FAA-approved manufactured part of improved design).	Before further flight after the logbook checks required in paragraph (e)(1) and (e)(2) of this AD.	Follow Pilatus PC12 Service Bulletin No. 27-015 as specified in paragraph (f) of this AD.
(5) Do not install inboard and outboard flap flexshafts, P/Ns 945.02.02.203 and 945.02.02.204.	As of July 26, 2004 (the effective date of this AD).	Not applicable.

What Revision Levels Do the Affected Service Bulletin Incorporate?

(f) The service bulletin required to do the actions required in this AD incorporates the following pages:

Affected pages	Revision level	Date
1 and 2	A	November 13, 2003.
3 through 11	Original Issue	June 4, 2003.

May I Request an Alternative Method of Compliance?

(g) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Standards Office, Small Airplane Directorate, FAA. For information on any already approved alternative methods of compliance, contact Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; facsimile: (816) 329-4090.

Does This AD Incorporate Any Material by Reference?

(h) You must do the actions required by this AD following the instructions in Pilatus PC12 Service Bulletin No. 27-015, pages 1 and 2, Revision A, dated November 13, 2003, pages 3 through 11, Original issue, dated June 4, 2003. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may get a copy from Pilatus Aircraft Ltd., Customer Liaison Manager, CH-6371 Stans, Switzerland; telephone: +41 41 619 6208; facsimile: +41 41 619 7311; e-mail: SupportPC12@pilatus-aircraft.com or from Pilatus Business Aircraft Ltd., Product Support

Department, 11755 Airport Way, Broomfield, Colorado 80021; telephone: (303) 465-9099; facsimile: (303) 465-6040. You may review copies at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:
http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Is There Other Information That Relates to This Subject?

- (i) Swiss AD Number HB-2004-068, dated March 4, 2004, also addresses the subject of this AD.

Issued in Kansas City, Missouri, on June 3, 2004.

Dorenda D. Baker,
Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. 04-13334 Filed 6-15-04; 8:45 am]
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